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EXECUTIVE SUMMARY OF THE THESIS

Exploring the role of B2B eCommerce companies in the Supply Chain Finance ecosystem

TESI MAGISTRALE IN MANAGEMENT ENGINEERING – INGEGNERIA GESTIONALE

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1. Introduction

Covid-19 brought to a liquidity stress that mostly affected SMEs, bringing to light the necessity to improve the working capital management: Supply Chain Finance was the right instrument (Bellucci, et al., 2021). In the same way, the pandemic accelerated the digital adoption, and many companies were forced to exploit eCommerce marketplaces. It is from this combination that B2B eCommerce players started recognizing the need for users to receive payment services and receive financial help. The aim of this dissertation is to study the Supply Chain Finance services offered by B2B eCommerce players.

2. Literature review

For what concerns Literature review, it was decided to focus mainly on three research streams: Supply Chain Finance, B2B eCommerce, and SCF in B2B eCommerce, aimed at identifying literature gaps.

The Supply Chain Finance stream of literature has been analyzed, first of all, in term of academic definitions (e.g., [1] Hofmann, 2005). A distinction has, then, been made between "finance oriented" and "supply chain oriented" perspectives (e.g., [2] Gelsomino et al., 2016). Specific SCF solutions (i.e., Reverse Factoring, Dynamic Discounting, Inventory Financing) have been deepened to describe their functioning and the main actors involved. A framework has been used to describe how companies select the SCF solutions to be offered. In the end, Supply Chain Finance adoption drivers and barriers have been discussed.

Then, the B2B eCommerce literature was considered by giving a definition of the topic (e.g., [3] Zhou, 2011), then analyzing the drivers pushing companies in developing B2B eCommerce or participating in it (e.g., [4] Balocco et al., 2010), and the barriers they faced in the adoption or development process both externally and internally. Then, an analysis of papers describing the business model of B2B eCommerce was carried out, with the relative success factors that are recurrent in literature.

Ultimately, literature treating B2B eCommerce providing SCF was discovered to be almost not present with few (2) papers describing in a superficial way the possible interaction between the two streams (e.g., [5] Pyka, 2016).

3. Objectives and framework

Academic literature lacks in describing which can be the drivers pushing B2B eCommerce players in offering SCF, as well as the barriers those companies face in developing such solutions. Furthermore, no paper has ever described the business model adopted by such B2B eCommerce in the provisioning of SCF services to platform users. Considering these gaps, the following Research Questions were formulated:

RQ1: which are the drivers and barriers in the introduction of SCF services for B2B marketplaces?
The aim of this Research Question is that of understanding what pushed B2B e-marketplaces in the provisioning of such services through their platforms. Being that a recent phenomenon taking place, it is also interesting to discover which are the barriers that B2B e-commerce encountered during their path.

RQ2: which is the business model of B2B e-commerce actors in the provisioning of SCF services?
The aim of this Research Question is to understand and describe the different business models of B2B e-commerce in the provision of SCF to its users. In particular, whether there are some peculiar or recurring business models. In this case, the Business Model Canvas (Osterwalder & Pigneurr, 2010) is used as a tool to describe the business model.

To answer to the Research Questions, a research framework has been developed to guide the research. The framework is based on three macro-variables described in the literature review: barriers, drivers, and Business Model Canvas.

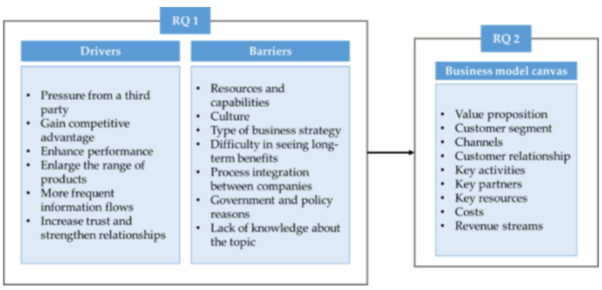

Figure 1: Preliminary research framework

4. Methodology

Starting from the literature review, academic gaps were identified, and research questions were formulated. At the same time, literature allows to understand the most important variables to be considered. This process led to the creation of the preliminary research framework.
To validate with empirical evidence such framework, a screening from secondary sources was carried out, as well as multiple exploratory case studies. Specifically, 8 case studies have been developed, integrating data collected through semi-structured interviews with secondary data (e.g., websites, reports, etc.). After having collected all the required information, a within-case and a cross-case analyses were performed, so to discuss and deep dive the results obtained. With such data it was also possible to update the preliminary research framework with the information that was not present in the academic literature but that emerged either from the screening or from the interviews.

Company	Offered service
Company A	Invoice financing, WC financing
Company B	Inventory financing
Company C	Factoring
Company D	Credit cards, Dynamic discounting
Company E	Dynamic discounting
Company F	Invoice discounting
Company G	Delayed payments
Company H	Instalment payments

Table 1: Case studies companies

5. Results and discussion

Combining confirmed results coming from the preliminary framework, and the new variables emerged from both the screening and the case study analysis, it was possible to create a final framework reported below (in blue the variables from the preliminary framework, while in green the new ones) that represents a general overview on the results concerning B2B eCommerce offering SCF services.

RQ1: which are the drivers and barriers in the introduction of SCF services for B2B marketplaces?

What emerged from the census is that the main reason for eCommerce players to provide SCF services is that of facilitating the access to credit to underfinanced companies. It is a driver already spotted from SCF literature where it is reported how SCF is an easier way to access working capital financing, as well as to faster cash flows and the creation of liquidity (Gomm, 2010; Wuttke, Blome, Foerstl, & Henke, 2013; Yan, Sun, Zhang, & Liu, 2015; Gelsomino, Mangiaracina, Perego, & Tumino, 2016). Other important drivers coming from the screening are the willing to strengthen the supply base and to improve the overall supply chain financial sustainability. On the other side, considering the case studies, the most important factor for the provisioning of SCF services is that of enhancing performance. It is a typical driver coming from the adoption of eCommerce and it is also aligned to what reported in literature (Kurnia, Choudrie, Mahbubur, & Alzougool, 2015; Stockdale & Standing, 2004). In fact, it was found that a higher amount of data and a more frequent information flows, help eCommerce in enhancing performance. It can be seen for what concerns credit scoring assessment: having the transaction information about companies is essential to better profile users and provide them more accurate financial services. The willingness to enlarge product range and, so, to better satisfy customers and the competitive pressure are two more drivers that recurred during the interviews.

As regards barriers, none were found from the screening of secondary sources. It means the results of this thesis come from the case interviews. Looking at the cross case, it is observable how the most important and frequently reported barrier is that of process integration between companies. This obstacle emerged from B2B eCommerce literature (Mohamed, Galal-Edeen, & El-Zoghbi, 2010; Rao, Metts, & Monge, 2003; Reynolds, 2000) and is encountered both in the integration between the users' systems and that of the B2B eCommerce, but also between the companies partnering with B2B eCommerce, and the eCommerce itself. The other variables identified are much less important in frequency, despite culture was highlighted to be an important one, as well as having the availability of the right resources and competencies to develop a SCF offering.

RQ2: which is the business model of B2B e-commerce actors in the provisioning of SCF services?

Empirical findings regarding each building block of the Business Model Canvas emerged and were compared to the existent academic literature.

Value proposition

B2B eCommerce players mainly offer solutions that have an impact on account receivables and payables rather than on inventories. In fact, 7 out of the 8 companies analyzed through the case studies offer such services and only one on inventories. In terms of structure of the solutions and actors' roles, most of the analyzed companies are one of the two parties of the SCF scheme, while only one acts as an intermediary between sellers and buyers.

Target customers

Companies may target their offering to users operating in specific geographical areas, to users that have a particular history on the platform (e.g., number of years of activity) or to users that respect other prerequisites (e.g., being a SME, being a supplier with already stretched payment terms).

Key activities

B2B eCommerce companies prefer to outsource the core activities of Supply Chain Finance and financial solutions to their partner, so that they can focus more on their daily business.

Key partners

Both the census and the interviews highlighted how B2B eCommerce companies mainly rely on traditional banks and financial institutions. Players that offer "digital native" solutions were found to be relying also on more innovative partners, such as fintech companies or technological providers.

Key resources

B2B eCommerce companies mainly rely on technological skills and competencies, money, data and platforms. In fact, technology is crucial to implement Digital-Native solutions but also to integrate the systems of the different players involved. Investments are always required to introduce innovations in the procedures. Information and data are fundamental in order to optimize and streamline processes and performances.

Channels
In terms of communication channels, most of B2B eCommerce company relies on its own platform. Customers are informed about the offering of financial and Supply Chain Finance services on the marketplace, usually with pop-ups or in the "Services" section. On the contrary, the distribution channel is either the eCommerce platform or the partner's one.

Customer relationships
Only 3 companies out of the sample talked about such variable. These organizations try to put in practice cross selling (to sell more services to customers and increase revenues and traffic on the platform) and lock-in effects (to increase customer loyalty and average lifetime value).

Revenue streams
The result here is a little fragmented. The sample companies, depending on the offered solution, make money in several ways: by applying transaction fees or license fees, by selling marketing data, by getting discounts in the DD case.

Cost structure
Almost every company stated that the major expense was related to the set-up of a dedicated platform or, anyway, to adapt the existing one to the provisioning of the solutions. Having set up a dedicated portal, companies mentioned that they have to invest also to maintain it and update it. Moreover, some companies pay license and transaction fees to their partners, which provide the services to the users on their behalf.

After having analyzed and combined all the information coming from the literature review, the screening from secondary sources and the case study analysis, it was possible to build 3 business model archetypes based on the offered SCF services. In particular, it was decided to deep dive those SCF solutions whose adoption by B2B eCommerce was more recurrent in the analysis, and for which there was enough data to deeply investigate the business model variables. These 3 services are Dynamic Discounting, Credit Cards and Invoice Financing, offered by 3 companies each.

Dynamic Discounting business model
In adopting DD, B2B eCommerce companies usually partner with DD providers, which manage the entire process of finding the optimal discount-advance situation. In order to do so, these partners rely on advanced algorithms to process all the relevant information. Companies target such offering to specific supplier segments, which may depend on their history on the platform or on other prerequisites. The offering is usually advertized through the eCommerce platform, while the service is delivered through the partner's one. B2B eCommerce players have the benefit of having discounts on invoices to be paid, which represents the main revenue stream in this business model. On the other hand, they have to invest to set-up the solution and to pay license and transaction fees to use the DD platform.

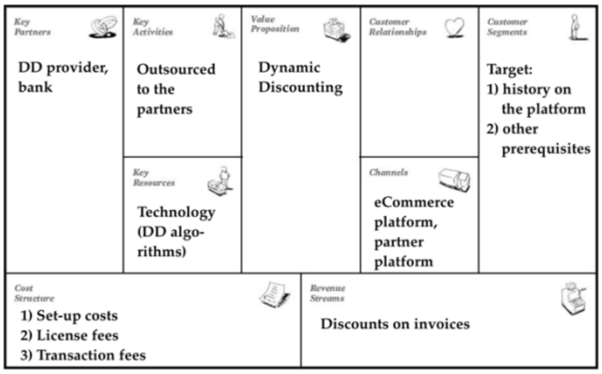

Figure 2: DD business model

Credit Cards business model
To offer Credit Cards to their customers, B2B eCommerce companies partner with payment circuits, outsourcing the payment management. In this case, the services are targeted only to customers respecting some criteria in terms of history on the platform. Data and information play a pivotal role to define customer profiles and their credit situation. The data that these companies exploit to create customer profiles and credit scoring is usually related to transactions and payment history: users should be assessed in terms of their activity on the eCommerce but also on their ability to pay-off commercial debts. The solution is usually sponsored on the eCommerce platform, while it is implemented through the credit card platform. For this business model, no particular pattern was found regarding revenue streams and cost structure. In fact, customers pay transaction fees to the payment circuit in exchange of delayed payments, and no cost is borne by the eCommerce.

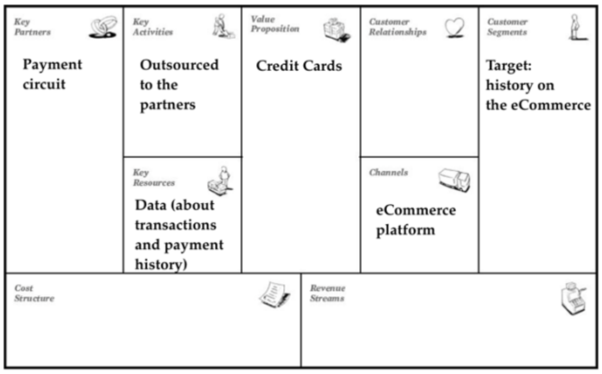

Figure 3: CC business model

Invoice Financing business model

In the end, concerning the Invoice Financing solution, eCommerce players collaborate with fintech companies. Again, the key activities are outsourced to the partners. In this case, the targeting strategy is based on geographical variables and on specific prerequisites, such as being a seller or a SME. In terms of resources, platforms are fundamental for the provisioning of the service, allowing invoice data exchange between suppliers and fintech companies. B2B eCommerce players make money out of Invoice Financing by applying transaction fees on each financed invoice.

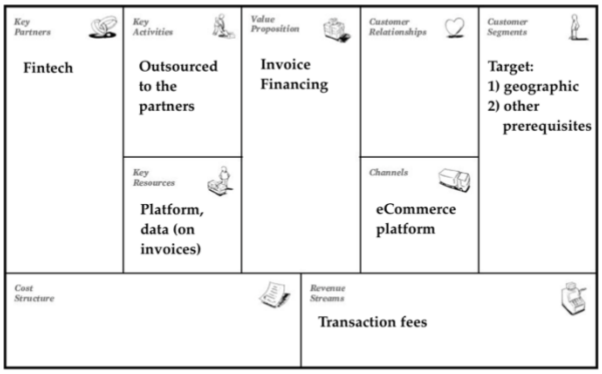

Figure 4: InvoF business model

Comparing the business models

Overall, by comparing these three business models, it emerges how the selection of the value proposition (i.e., the SCF solution) influences the key partner the key resources and the customer segments variables. Among these, some relevant considerations emerge when analyzing in detail the key partners and key resources variables.

First, the choice of the partner is strongly related to the SCF solution offered, which is not new to the SCF world, but what is new is the birth of collaborations among B2B eCommerce platforms and SCF providers of different types. From the case studies emerged that all the B2B eCommerce platforms represent one of the traditional SCF players (i.e., acting as the buyer who offers a SCF solution or the supplier who adheres to a SCF solution), with the exception of one company, which instead acts as a facilitator/intermediary to offer SCF solutions to the users of its platform. This opens up different possibilities in the SCF ecosystem, confirming that B2B eCommerce platform can become a new player within it.

Second, another interesting element regards the key resources variable. Indeed, data about the history on the platform and the transaction on the platform are key to develop the SCF solution. This type of information concerns transaction and biographical data, which are used to create customers profiles and, mainly, to understand the credit situation and stability of the companies using the eCommerce platforms. Such information may be fundamental, as said before, for services like Credit Cards, in order to understand whether the specific user is eligible for the service. This furtherly strengthens the possibility for B2B eCommerce platform to have an important role in the provision of SCF solutions.

6. Conclusions and future developments

Theoretical contributions

The work aims at filling the literature gap between Supply Chain Finance and the B2B eCommerce industry. It was discovered that a literature regarding the provisioning of SCF solutions by B2B eCommerce companies still lacks. For the first research question, no article describes the main drivers that pushed B2B eCommerce companies in starting to offer SCF services to their users. New important factors pushing such companies in providing SCF services to users were found and added to the initial framework. This is important from an academic standpoint because it introduces new factors that could determine the reason why B2B eCommerce companies begin the SCF journey. It is important also to understand which had been the major barriers and obstacles faced in the development of this offering. Like in the case of drivers, new barriers emerged from both case studies and secondary sources, being a contribution to existing literature. The contribution to theory regards the definition of new barriers for SCF, eCommerce and the meeting point of the two research streams. Concerning the second research question, literature does not concentrate on understanding the business model describing the way in which companies provide those services. The contribution of this thesis is the creation of 3 business model canvas that describe the offering structure of Dynamic Discounting, Credit Cards and Invoice Financing by B2B eCommerce players. This is relevant because it provides an academic tool that can become a reference on how these SCF services are designed.

Managerial implications

Having the most common barriers listed and available for checking, can be an important resource for companies investigating on the applicability of SCF to their B2B eCommerce. It can help these companies getting prepared for possible obstacles in advance and so setting up the necessary resources to face those problems effectively. On the other side, knowing the drivers that pushed companies in developing a SCF offering to their users is fundamental. Companies can be in similar situations as the interviewed ones and can understand that developing a SCF solution is the right decision. On the business model side, the major structures developed by B2B eCommerce actors in the provisioning of Dynamic Discounting, Credit Cards and Invoice Financing are outlined. In this case, the business model with actual common practices can work as a road map for an eCommerce company that is willing to develop such SCF solutions. On the other side, this work can also be useful for SCF providers. In fact, by knowing the drivers for B2B eCommerce, they can structure their offering so that it is aligned to what is effectively needed by them. Instead, understanding the major barriers could be important to directly provide solutions to those problems, thus being probably more effective and convincing in proposing their offering to companies.

Limitations and future developments

First, it is important to underline that the entire work is based on a limited number of case studies: following research can concentrate on a larger number of interviews thus achieving a more detailed and generalizable framework.
Furthermore, despite the companies' headquarters are settled in different nations, the number of companies coming from different continents is not representative. Future studies can specialize in understanding the conditions of specific continents and thus providing a more detailed analysis. Another limitation lies in the fact that the size of most companies interviewed is large. This means that there can be problems when applying the framework to smaller eCommerce that can have a completely different situation. Future studies should divide for B2B eCommerce size since different dimensions can imply different drivers and barriers, or different available solutions in the offering architecture.
Generally, this dissertation analyses two research streams that have recently intersected and that have never been studied together. Given the fluidity of such streams, the results of this dissertation cannot be considered definitive but must be continuously updated and improved according to the new discoveries.

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